

# Exhibit F

## Part 3 of 3

top of Mt. Olympus, the highest mountain in Greece, but this idea evolved into Olympus being in some mysterious region far above the mountain. The entrance to Olympus was a great gate of clouds maintained by the Seasons.

**Pan:** Inventor of the flute, Pan was a wonderful musician who created merriment everywhere he went, especially in woodlands, thickets, forests, and mountains. Part man, part goat, he has a goat's horns and a goat's feet. He played sweet melodies to attract nymphs whom he loved, but they always rejected him because he was so ugly.

**Pandora:** The first mortal woman, who was made of clay at the request of Zeus and who was endowed by each of the gods with a special gift. In revenge of Prometheus, who had stolen fire from Zeus and given it to mortals, Zeus gave Pandora a box full of evil spirits, believing she would marry Prometheus and the evil would be released upon him. Instead, she married another man, who opened the box and released all the evil upon the world.

**Pegasus:** A winged horse sprung from the blood of Medusa (see above) when Perseus cut off her head. Tamed by Minerva (see above) or Neptune (also called Poseidon, see below), Pegasus was given to Bellerophon to conquer the Chimera of whom Medusa was one (see above). When Bellerophon tried to fly to heaven upon Pegasus, Zeus sent a fly to torment the horse, causing the fall of his rider.

**Penelope:** Daughter of Icarus (see above), she was courted by many suitors when it was believed that her husband Odysseus (see above) would not return from the Trojan War. In order to forestall the suitors, she said she would choose a husband from among them when she had finished weaving a tapestry. Each

night she would unravel the work she had completed during the day in hopes that her husband would return.

**Persephone:** Daughter of Zeus and Demeter, she was abducted by Hades (see above) to become queen of the under world. Demeter, not knowing where she was, wandered the world seeking her. Out of pity for Demeter's torment, Zeus allowed Persephone to spend six months on Earth and six months in the under world. She is thus associated with spring and summer, rebirth, and crop fertility.

**Poseidon** (*Neptune in Roman mythology*): Zeus' brother and the second most powerful god, Poseidon is ruler of the sea, where he had a magnificent undersea palace. Master of horses (he gave the first horse to man), he calmed the seas by driving his golden chariot over the waters. He is always depicted with his three-pronged spear, which he uses to create storms at sea.

**Romulus:** The legendary founder of Rome and the son of Mars (see above), Romulus and his twin brother Remus were thrown into the Tiber river in an attempt to kill them at birth. They were rescued and raised by a she-wolf, eventually conquered their foes, and laid the foundation for the city of Rome that would become the capital of the western world.

**Satyrs:** Like Pan (see above), Satyrs were goat men, with the ears, tail, and budding horns of a goat, although they were sometimes represented with the tail and ears of a horse. They were the companions of the god of wine, Dionysus, and thus contributed to the merriment of festive occasions.



**Sibyl:** A fortune teller who asked for eternal life but forgot to ask for eternal youth. The sibyl usually wrote her prophecies on leaves which she left at the opening of caves.

**Silens:** Part man, part horse, they walked on two legs, unlike the satyrs (see above) who walked on four legs. They are depicted on Greek vases, sometimes with horses' ears and always with horses' tails.

**Sphinx:** In the Greek legend, the sphinx is a monster with a woman's bust and a lion's body. She liked to find mortals, present them with riddles they could not answer, and devour them. She swore to kill herself if anyone could answer her riddle, "what animal walks on four legs in the morning, two legs at noon, and three in the evening." Oedipus correctly answered it ("man") and saved his kingdom.

**Styx:** One of five rivers separating the underworld from Earth, Styx possesses the water that the gods used to seal oaths, and whose waters possess magical powers (see Achilles above). Acheron, the river of woe, pours into Cocytus, the river of lamentation. An ancient boatman named Charon ferries the souls of the dead across these rivers where they will either be condemned to torment or sent on to bliss in the Elysian Fields, which is a heavenly place of perpetual happiness.

**Thor:** The Norse god of thunder and of the home, he presided over the weather and crops. His hammer, like Zeus' thunderbolt, created thunder. The English word "Thursday" is derived from his name.

**Titans:** The generation of gods before Zeus, the Titans were of enormous size and strength. Cronus (or Saturn) was chief of the Titans until Zeus, his son, dethroned him (this time is called "the

twilight of the gods") and established a new generation of gods.

**Venus (Aphrodite in Greek mythology):** She is said either to be the daughter of Zeus and Dione, or to have sprung from the foam of the sea (there is a famous painting by Botticelli of Venus ascending from a shell). One of the Muses, she is the goddess of love and beauty who enjoys laughter. She moves in radiant light, and without her presence there is no joy. In some accounts, she is treacherous and malicious, especially as she deceives men. The myrtle is her tree, and the dove, sparrow, or swan her bird.

**Vulcan (Hephaestus in Greek mythology):** Although the only ugly god, and lame, he is kindly and peace loving. He makes armor, furnishings, and weapons for the gods, with the help of his handmaidens whom he forged out of gold. His workshop is said to be under a volcano, which he causes to erupt when his forge is hot. He is married to one of the three Muses, Venus (see above).

**Zeus:** Supreme ruler, Lord of the Sky, rain god and cloud gatherer, Zeus wielded the awful thunderbolt. He used lightning to express anger at his subjects and humans, and to secure their attention. His wife, Hera, jealous of the many children fathered by Zeus, often sought to deceive him and harass his children and their mothers.

### — British Legends —

**Arthur, King:** Possibly derived from a blending of a chieftain from the fifth or sixth centuries and a Celtic god, the Arthurian legend evolved in both Britain and France over several centuries, adding such elements as the Knights of the Roundtable,

CHAPTER 10



ARCHETYPES AND  
BIBLICAL REFERENCES

*"I don't believe people are looking for the meaning of life as much as they are looking for the experience of being alive."* —JOSEPH CAMPBELL

*"To listen to some devout people, one would imagine that God never laughs."* —AUROBINDO GHOSE

## INTRODUCTION

*Much of the world's literature is derived from ancient stories that have become imprinted on our subconscious minds. From troubadours who preserved stories before people could write to Star Wars characters, writers have known that by invoking certain images, symbols, or language from imprinted stories, they could evoke powerful emotions from their readers. Harry is, himself, a classic archetypal hero, and understanding his archetypal forebearers will explain much of his appeal to young readers who identify with the pleasures and perils of heroism better than most people.*

## ARCHETYPES AND THE COLLECTIVE UNCONSCIOUS

Carl Jung, a psychologist, student of Sigmund Freud, and one of the foremost thinkers of the twentieth century, defined a concept he called "the collective (or universal) unconscious." He asserted that all modern beings retain patterns of their ancient ancestors, and that regardless of geography, race, or religion, all people everywhere share common fears and desires. Biologists have long recognized instinctual patterns in lower animals—the nesting of birds, the ritual dance of storks, the spinning of spider webs—and recent DNA discoveries confirm that except for tiny differences in DNA structure, all creatures are biologically similar.

Jung argued that the collective unconscious in society is expressed through "archetypes" that embody a primordial, preconscious, instinctual expression of mankind's basic nature. Because

people undergo essentially the same kind of basic experiences, the expression of the collective unconscious is universal, and archetypes are as meaningful to remote tribesmen hunting for food in the jungle as to Wall Street executives fending off predators.

Anthropologists have discovered many universal motifs that support Carl Jung's proposition that all people everywhere share archetypal beliefs and experiences. Almost every culture has embodied in its legends, literature or religion similar stories or beliefs, such as the destruction of the world by flood, famine, plague, or earthquake; the slaying of monsters; sibling rivalries; and the Oedipus legend. Although the details vary greatly from culture to culture, the basic patterns are amazingly similar. These stories express mankind's reaction to essentially changeless situations, originating from experiences, attitudes and problems related to the universe, gods, survival, parents, and children. Every generation retells these ancient archetypes to interpret the world as they experience it.

## HARRY AS ARCHETYPE

Almost all works of literature that have endured time tell the stories of archetypal characters. The phenomenal success of Harry Potter suggests that he and his world are reinterpreting ancient archetypes for a generation of young readers who may have been jaded by reality television but eagerly embrace their connection to their collective unconscious.

Lord Ragland, in his groundbreaking study of archetypes, *The Hero: A Study in Tradition, Myth, and Drama* identifies three principal categories of archetypes: characters, situations, and



objects/symbols. His is a long list, but here are some of Ragland's observations, some of which appear in Harry and his world.

The hero in every culture experiences a series of well-marked adventures that strongly suggest a ritualistic pattern. Ragland finds that traditionally the hero's mother is a virgin, the circumstances of his birth are unusual, and at birth some attempt is made to kill him. He is, however, spirited away and reared by foster parents. Little is known of his early childhood, but as he nears maturity he returns to his future kingdom where he learns some of the secrets of his past. After a victory over the king or wild beast, he marries a princess, becomes king, and reigns uneventfully. After losing favor with the gods, he is driven from the kingdom and meets a mysterious death, often at the top of a hill. His body is not buried but resides in one or more holy sepulchers.

Situations which the archetypal hero endures include:

1. The quest. The hero searches for someone or some talisman (object) which, when found, will restore the health of the kingdom.
2. The task. To save the kingdom or win the hand of a princess, the hero must perform some nearly superhuman deed.
3. The initiation. The young hero entering puberty must survive a ritualistic act that transforms him into understanding the problems and responsibilities of adulthood.
4. The journey. The hero must seek information or truth through a perilous journey that often includes a descent into the under world.

5. The fall. The hero descends from a higher to a lower state of being that usually involves spiritual defilement and a loss of innocence. The fall usually results in the hero's expulsion from paradise and a penalty for disobedience.
6. Death and rebirth. The most common of all archetypal situations, this reflects the influence of the cycle of life and death, winter and spring, night and day.

## MORAL STRUCTURE AND THE HOGWARTS SYSTEM

Although religion seems absent in the novels, Hogwarts and its inhabitants are rooted in moral settings and situations. Scholars who study the history of religion realize that people have expressed spirituality in many ways. Ancient peoples believed that animals, plants, and objects contained the spirits of gods who protected them. Groups such as Native Americans designated specific people to direct rituals and preserve myths about spiritual beliefs. The diverse religions that modern cultures practice emerged over thousands of years and are based on the teachings of spiritual leaders, including Jesus, Mohammed, Confucius, and Buddha. Some religious guides told their followers that God was kind and forgiving, while others depicted a more strict and intolerant deity.

Harry and the Hogwarts community reflect numerous archetypal patterns and religious values, although there is no mention of religion in Books I-III. Harry does not attend church in either the Muggle or magical worlds, nor do any of his friends, teachers, or family. If Hogwarts or Hogsmeade contain a chapel,

or if the Dursleys' neighborhood houses a church or cathedral, they have not been mentioned in the series so far. Christmas holidays at Hogwarts are secular, and Easter is referred to mostly as a way to note advancing time in the school calendar. Students do not pray before meals or at bedtime. Bible study is not incorporated in the curriculum.

Despite the omission of religious ceremonies, Hogwarts and the magical world expect students and adult wizards to accept high standards of moral conduct, of how to live virtuously, dutifully, and purposefully to aid others and rid the world of evil. Good is emphasized in characterizations and plots. Children are encouraged to respect their elders, somewhat like the ancestor worship practiced in Asian and African religions.

The school song is like a psalm, praising and uniting the community. Professors resemble missionaries seeking student followers. The lessons and examples are reminiscent of biblical people and events which symbolize universal experiences of suffering and joy, defeat and perseverance, and hate and love. Both biblical and Harry Potter characters withstand hardships because of an angry God. The Bible tells about demons and sorcerers, unexplained wonders, and brutal tortures and murders—clearly defined archetypal experiences from every culture.

## BIBLICAL ALLUSIONS

Because the Bible is the theological and cultural basis of western society, writers often retell its stories in fictional works, or make indirect references to it in order to suggest to readers some values or principles the Bible addresses. This is a time-

honored use of allusion in literature, which Rowling also uses.

Archetypal stories narrate miraculous incidents similar to the phenomena Harry witnesses, as well as his struggle of good versus evil. Harry is marked as the chosen one by his scar, which resembles stigmata that sometimes appear on fervently religious followers. It could also be viewed as a brand of shame. When Cain murdered Abel, God placed a blemish on his forehead. Harry's scar is symbolically in the shape of a lightning bolt, hinting of the storms that terrified ancient peoples as signs of forthcoming disaster.

Harry's parental legacy signifies that he is the heir to the wizard kingdom, preparing himself for Armageddon and Resurrection. His initial visit to Diagon Alley, being immersed in wizard culture, could represent his initiation as the wizard world's appointed savior. He is assisted by his two closest friends, Ron and Hermione. Harry might be considered the prodigal son, returning to his true home. He also could be referred to as a messiah, apostle, or prophet within the wizard community because he spreads the message that good will ultimately triumph over evil.

Harry's nightmares include premonitions about evil somewhat like the dreams of Joseph and other biblical characters. As a toddler, Harry is saved from death when Hagrid transports him to the Dursleys' in a bundle of blankets, which recalls the basket used for infant Moses' escape when the Pharaoh ordered that all male babies were to be killed or the "swaddling clothes" in which the infant Jesus was wrapped. Harry is also a pious pilgrim, intensely pursuing his journey to find his identity and power to enact vengeance for Voldemort's crimes. Harry is like

the potter that Jeremiah observed who continued molding his clay at his wheel until he created flawless jars. Jeremiah compared the clay to people, declaring that God was also a potter who toiled with his creations until he was satisfied they were ready for service.

Harry can also be regarded as a medieval crusader, draped in symbolic robes in quest of the Holy Grail. As a Seeker, Harry battles heretics during games of Quidditch. His accident symbolizes a fall from grace before he can rise again as a worthy spiritual leader. Avoiding the fate of Lot's wife who turned into a pillar of salt when she looked back at Sodom, Harry leaves the Quidditch field with his face forward, avoiding glancing to either side. He also evades the basilisk's gaze. Themes of betrayal, love, loss, and inner conflict permeate Harry's life as they do biblical characters' experiences.

### GOOD VERSUS EVIL

Saints and sinners populate the pages of the Harry Potter series. Harry is surrounded by wise men and women, who were known as "magi" in the Bible. Thought to have been scholars, the wise men presented the infant Jesus with presents, somewhat like Harry's professors offer him material, intellectual, and emotional gifts. Dumbledore is wise like Solomon and shares wisdom with his students that mimic parables and proverbs. Lupin resembles the Apostle Paul whose letters offered advice and warnings.

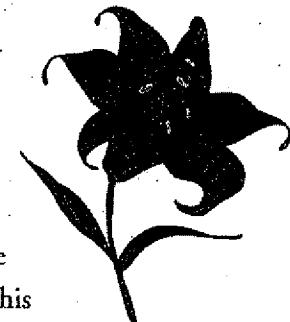
Harry's parents suggest Christian symbolism. There are many James mentioned in the Bible, including two of Jesus' disciples.

Saint James, the brother of Jesus, was martyred for his beliefs somewhat like Harry's father who died defending his principles. Lily Potter's name represents her purity of spirit as demonstrated by sacrificing her life to save her son Harry. Lilies signify the resurrection and ascension of Christ after his crucifixion and a symbol of Easter.

Sirius Black somewhat resembles Job because of the suffering he patiently endures resulting from false accusations and unjust imprisonment. Black, confined to an island, also recalls John the Divine who wrote the *Book of Revelations* while he was a prisoner on the island of Patmos. Molly Weasley is a spiritually strong, determined woman who, like biblical women, defended their families from evil. Hedwig, named for a saint, uncomplainingly serves Harry and comforts him in times of stress.

Percy Weasley is like a Pharisee who strictly follows rules while acting smugly superior. Harry and many of his classmates might be described as Good Samaritans because of their acts of kindness and generosity. The trio of Harry, Ron, and Hermione suggest the power of three and the spiritual trinity.

Other biblical allusions include Voldemort as an archangel, especially when he is referred to by the title "Lord." Harry wonders which of his classmates has betrayed him (like Judas) when the diary is stolen from his room in Book II. The decadent, greedy Dursleys seem to lack souls and emphasize how the term "non-believer" gains new meaning as defined by wizards. Some Muggles are like Scythians who were uncivilized and foreigners within their communities. Aunt Marge cruelly suggests that



◆ Harry is retarded, and nobody defends him at what proved to be Harry's "last supper" at the Dursley home.

◆ Biblical sorcerers and witches are depicted as sinners. Paul visited the magician Elymas Bar-Jesus, the wizard of Cyprus, who tried to discredit him. The Samaritan Simon Magus was a sorcerer who tried to purchase more power when he was impressed by the apostles' abilities. He admitted his sin, but traditional legends claimed that he later started and spread heresy. Daniel slew the dragon Bel, a Babylon god described in the Apocrypha (early Christian texts not included in the New Testament), and his faith protected him when he was thrown in a lion pit, somewhat like Harry facing the basilisk.

### SACRED PLACES

◆ Even though Hogwarts is a secular site, it represents Harry's spiritual home where he is awakened to new awareness and understanding of himself and the world. Hogwarts enables Harry to see the possibilities of peace and harmony for both wizards and Muggles. Without his immersion in the Hogwarts community and commitment to its creed, Harry would have been powerless to confront evil that threatens not only himself but the world. Hogwarts is isolated like Essenes, a community where a sect prepared for the final confrontation between good and evil. The castle is a sanctuary like the community of Samaritans or a monastery. Dumbledore's office protects precious artifacts, the magical equivalent of the Ark of the Covenant encasing the Ten Commandments. Bill Weasley works at the Gringotts bank in Egypt; a central location of bib-

lical events. The Chamber of Secrets could be the Garden of Eden with Harry as Adam, Ginny as Eve, and the basilisk as the seductive serpent. Ginny's fall from grace is the catalyst for the abandonment of the chamber and new order at Hogwarts. The hissing of the chamber's doors and the basilisk suggest ancient languages being released from the Tower of Babel. Hogwarts' chambers and the Shrieking Shack's upstairs room harbor evil, like biblical lion dens and torture rooms. The threatening message written on the wall in Book II resembles the message that Daniel translated for the Babylonian King Belshazzar, warning him that he would be punished for looting a temple.

◆ The architecture of Hogwarts and other wizard sites parallels biblical structures. Hogwarts sits on a cliff above Hogsmeade; temples often sat on hills above populated areas. The wizard castle has stone gates, steps, towers, wells, and chambers like those described in the Bible and preserved by archaeologists. Hogwarts' walls resemble those surrounding cities in the Holy Land, and tunnels beneath the castle are like those used to protect early Christians from persecution. The cave Harry enters on his first night at Hogwarts are like the caves used to hide the Dead Sea Scrolls from the Romans or to bury the dead.

### OBJECTS AND NUMBERS

◆ Religious artifacts are often revered as sacred items. Many of these objects are enshrined for the devout to visit or used in prayer. Others have vanished, only present in biblical or scholarly descriptions. These sacred artifacts serve as symbols of religiosity. Several objects in the Harry Potter series suggest similar

CHAPTER 12



SCIENCE

*"Imagination is more important than knowledge.  
Knowledge is limited. Imagination encircles the  
world." —ALBERT EINSTEIN*

## INTRODUCTION

*Although the Potter series seems to lack science and technology, the books actually are filled with scientific undertones. Ironically, while Harry and his peers appear to shun technology, which is identified as being part of the despised Muggle culture, the stories appeal to readers immersed in a technology-distilled environment.*

## SCIENCE AT HOGWARTS

Harry rarely watches television or plays computer games, and it is odd that readers would embrace his non-technological life. Of course, Dudley has access to these state-of-the-art electronic devices, but he is loathsome to readers. Nobody at Hogwarts surfs the internet or communicates by e-mail. (One explanation for this might be that the use of these systems outside academia was not widespread until the mid 1990s, after Books I through III are set.) However, like a stereotypical mad scientist, Arthur Weasley enjoys tinkering with technology, using magic to enhance a car. The castle is an engineering achievement. Students study applications of astronomy, botany, and chemistry. They combine herbs and animal-based substances to make potions. The fantastical creatures they learn to control and bizarre plants parallel genetically engineered food and livestock. Zoology is of interest because of the wild and domesticated animals at Hogwarts. Optics is crucial for understanding photography and mirrors; lenses have been manipulated for centuries to create magical illusions, and reflections in people's pupils were the source of

the term "evil eye." The students are affected by weather extremes. Geology and metallurgy are present in the form of stones and metals, particularly wizard money, that the students encounter around the castle. The petrification of students in Book II also demands a scientific explanation, such as understanding how wood is fossilized. Since ancient times, some humans have believed that precious gems and metals can cure illness and extend life spans.

Health and nutrition are incorporated in the students' hearty meals and recurring infirmary visits. Physics is an integral part of the Potter novels because the characters attempt to control time. Lunar cycles and moon phases regulate activity at Hogwarts. Measurement of time is also crucial for preparing potions and traveling. One of the British units of measurement is the hogshead, a fitting measurement for Hogwarts.

Although not considered credible by modern standards, astrology, connected with pioneering astronomical observations, was a significant science during the Middle Ages and Renaissance, and astrological aspects such as predictions permeate the Hogwarts culture. The moving wizard pictures rely on a specially concocted potion to achieve that effect which is similar in appearance to java movement in internet images. Interestingly, the term wizard has been used to describe outstanding factual scientists. Thomas Edison was called the "Wizard of Menlo Park" (where his laboratories were located). Renowned botanist George Washington Carver was known as the "Wizard of Tuskegee," and eighteenth-century astronomer and mathematician Benjamin Banneker was also labeled a wizard because of his genius and talent.

## ALCHEMY AND CHEMISTRY

The science most clearly related to the Harry Potter series is chemistry in the form of alchemy. Chemists study the composition of matter and how it changes. The comprehension of chemical processes was enhanced by early alchemists' experiments which built a foundation for chemistry, which would eventually be recognized as a science in the seventeenth century. Medieval scientists practiced alchemy, hoping to produce gold from less valuable metals. In addition to trying to manufacture gold, alchemists desired to develop potions, known as elixirs, to ensure good health and extend life spans. Ancient writers stated that animals, such as stags, lived hundreds of years after drinking such liquids, proving that potions worked.

Founded in Egypt, alchemy was practiced throughout the Mediterranean regions and as far away as China. Ancient Greek and Roman writings discussed alchemy. Empedocles, in the fifth century B.C., stated that all objects consist of water, air, fire, and earth, establishing the basis for alchemy theory. The idea of making gold appealed to ancient peoples, including Caligula, a Roman emperor, who ordered his servants to transform a sulphurous type of arsenic into gold. In the fifth century A.D., Zosimus the Theban attempted similar work based on his knowledge that sulfuric acid dissolved metals. He was the first person to mention the philosopher's stone. Early alchemy was controversial, and Emperor Diocletian demanded that books about such experiments be burned.

Aristotle's idea that matter naturally attained perfection



formed the basis of alchemists' beliefs. Alchemists hypothesized that because the earth created gold from imperfect metals that they should be able to replicate this process. Because of its mystical nature, early alchemy was associated with magic and astrology. The *Summa Perfectionis* (*Summit of Perfection*), written by the Arabic scientist Geber, was the first significant publication addressing alchemy methods. Arabic alchemists said that metals were composed of mercury and sulfur which inspired European alchemists, most notably Roger Bacon, Albertus Magnus, Andreas Libavius who wrote *Alchemia*, and Philippus Paracelsus, who said that the salt, sulfur, and mercury of compounds represented earth, air, and water. Paracelsus believed that one unknown element was the source of these other elements. He called this the "alkahest" and thought it was the philosopher's stone.

Referred to as "philosophers" because science in the Middle Ages was known as natural philosophy, alchemists, such as

Nicholas Flamel who lived in the fourteenth century, focused on producing a philosophers' stone which they believed could magically convert substances into precious metals such as gold or silver. Flamel supposedly converted mercury into gold in 1388 and lived to be 116 years old. Scholars say that Flamel pretended to be an alchemist to disguise the source of his vast wealth through moneylending and questionable business ventures.

Historically, these scientist-philosophers distilled a form of mercury and purified it with salt and vinegar. Then, the mixture was placed in a crystal vase and heated over fire. The alchemists labeled the melted substance as "liquor." When boiled in a white vase, lighter colored liquor supposedly became silver, and red liquor turned into gold. The process was complicated and lacked scientific validity, frustrating alchemists who repeatedly failed to manufacture desired products.

Despite the physical impossibilities of chemically producing gold from lesser elements in the Middle Ages, legends about the wondrous abilities of alchemists circulated. Woodcuts pictured alchemists and illustrated alchemy manuals. In 1386, Chaucer referred to the alchemists and the philosopher's stone in the "Yeoman's Tale" (from *The Canterbury Tales*). Alchemists divided into two groups: one evolved into scientifically-grounded chemists, while the other focused on metaphysical aspects that resulted in alchemy being considered a fraudulent activity practiced by charlatans to deceive people. During the Middle Ages, alchemists were motivated by greed and control. Both European and Asian cultures embraced the idea of using powder, usually described as being black, as a philosopher's stone to

turn objects into gold. This color imagery reinforces motifs of darkness and the intersection of good and evil in the Harry Potter novels, such as Sirius Black being depicted as sinister but actually metaphorically becoming Harry's golden mentor. Some modern scientists consider alchemy to be a useful methodology, and twentieth-century book titles and other references to alchemy signify that the subject is chemistry-related.

Hogwarts could be considered a metaphorical philosopher's stone which initiates Harry's metamorphosis from an insecure child into an empowered wizard. His professors and Hagrid are symbolic alchemists. The Egyptians stressed that alchemy abilities should not be used for personal gain but for altruistic and spiritual purposes. Like astronauts who develop pharmaceuticals in space that are impossible to manufacture on Earth, Harry and his friends may devise an elixir to cure some plague in their parallel world.

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◆ *Projects*. New York: Sterling, 1999. Ideas for a wide variety of experiments and displays.

#### ◆ INTERNET RESOURCES

◆ Alchemy

◆ <http://www.levity.com/alchemy/index.html>

◆ Science Sites

◆ <http://kidscience.about.com>

◆ Log on to [www.beachampublishing.com](http://www.beachampublishing.com) for many additional projects, discussion questions, writing and research ideas, websites, and bibliography.